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Governor Chafee Congratulates Collaborative Research Grant Recipients, Rhode Island Treasurer Gina Raimondo Tops Agenda at First STAC Meeting of 2011

26 Scientists from 13 Institutions receive more than $1.4 million in grants to support innovative, collaborative research projects

February 3, 2011 (Providence, RI) — The Rhode Island Science & Technology Advisory Council (STAC) today announced the winners of the 2011 Rhode Island Research Alliance Collaborative Research Grants, the fifth round of awards aimed at facilitating collaborative research in Rhode Island. The awards, totaling $1,435,822, will support eight projects, representing 23 scientists from 13 educational institutions, hospitals and private companies throughout Rhode Island.

The program is designed to stimulate collaborative research projects that are well-positioned to attract significant follow-on funding from agencies such as the National Science Foundation and the National Institutes of Health or that are ripe for commercialization.

"I believe that in order to create jobs and grow our economy we must focus on our existing assets – and some of Rhode Island's most valuable assets are the great minds at work at our colleges, universities, and medical institutions," Governor Chafee said. "These grants – and the potential follow-on funding that they may yield – are an investment in the future of our state. I am pleased to see this level of collaboration between our private sector firms and our hospitals and institutions of higher education, and I look forward to the research and innovation these grants will make possible."

To date, the STAC Collaborative Research Awards have yielded nearly $10 million in the state in the form of follow-on funding from federal and private sources. That outside

investment has supported additional research efforts, new patents, equipment and products, and the formation of new companies.

“Making capital available for research projects, which have the potential to attract later-stage capital is a good approach for encouraging entrepreneurship and start-up companies,” said General Treasurer Gina M. Raimondo. “I look forward to learning more about all these projects as their research progresses.”

Since STAC’s inception in 2007, the state has invested nearly $6.5 million in 38 teams, representing 97 researchers from 35 public and private institutions that conducted multi-disciplinary, multi-institutional research with great promise for follow-on funding.

“These grants not only support some of the state’s most promising research endeavors, they also foster the type of collaboration that’s crucial to growing our knowledge economy,” said Keith Stokes, executive director of the Rhode Island Economic Development Corporation. “The significant increase this year in the number of award applicants and the number of private firms willing to partner with academic and medical institutions demonstrates the vitality and promise of the state’s health, science and technology sectors.”

The 2011 award recipients include academic and industry scientists pursuing research in mercury emission control, traumatic brain injuries and infection prevention, for example. Complete details on the awardees are included below. Winning teams include scientists from the University of Rhode Island, Brown University, Bryant University, Rhode Island Hospital, Women & Infants Hospital and eight private research companies.

Priority was given to high-impact projects that are collaborative across Rhode Island institutions and well positioned to receive follow-on funding, particularly from federal agencies. Those with significant technology development and commercialization potential were also encouraged.

Today’s STAC meeting also featured brief remarks by Raimondo on the importance of seed funding. For example, previous grant winner Nabsys received $4 million in venture capital funding from Raimondo’s former business Point Judith Capital.

Another previous awardee, Pradeep Guduru of Brown University, explained how his STAC grant provided the catalyst for an eventual $1 million grant from NASA.

Also at the meeting, Brendan McNally, executive director of the Rhode Island Center for Innovation and Entrepreneurship (RI-CIE), gave a presentation on how the center is helping entrepreneurs translate their big ideas into new ventures and products. STAC recommended the establishment of RI-CIE so that scientists, engineers and entrepreneurs would have a central location to network and connect with the resources they need to develop their innovative business ideas. A 2009 research grant winner, Jeffrey Morgan of Brown University, shared with attendees how he used RI-CIE resources to help launch his company, MicroTissues.

About the Collaborative Research Awards Program

With the inception of the Rhode Island Research Alliance in 2007, STAC created a competitive, merit-based award program to support projects that promote inter-organizational, multi-disciplinary collaboration which are positioned to attract follow-on funding from out-of-state sources — the Collaborative Research Awards program. With follow-on funding, Rhode Island has the potential of increasing its competitive research capacity, advancing technological development and boosting commercialization potential within the state

To administer the program, STAC uses a competitive application process similar to that used by the National Science Foundation. Peer reviewers who are scientific experts familiar with a proposal's area of focus evaluate the proposal on the basis of scientific merit and broader impacts in the community. A subcommittee also reviews the proposals based on how well the proposal meets the objectives of the program. Awardees represent the most exciting proposals which combine high scientific merit with opportunity for significant follow-on funding or substantial commercial potential, such as valuable licensing prospects or the creation of new companies, at the completion of the one-year grant cycle.

About the Rhode Island Science & Technology Advisory Council (STAC)

The Rhode Island Science & Technology Advisory Council (STAC) is a coalition of leaders in the field of science and technology representing business, medicine, higher education and government. STAC was formed in 2006 and is charged with recommending to state leadership strategic investments that drive economic development and job creation by maximizing the economic impact of research, technology and innovation. STAC policies and programs: 1) support the state's research & development activity and promote collaboration across institutions; 2) encourage entrepreneurship and new company creation through the transfer of new technologies and discoveries into the marketplace; and 3) create an environment that enables innovation to flourish. STAC serves as Governing Committee for the $20 million RI NSF EPSCoR grant.

More about the 2011 Collaborative Research Grant Awardees:

<u>Project 1:</u> Development of multi-scale brain injury models for concussion and traumatic brain injury

This team is working to aid companies in designing safer and improved protective gear and to aid the medical community in producing improved quantitative traumatic brain injury (TBI) diagnosis and assessment tools. This collaboration will result in a sustainable, long-term TBI-focused research program that include student training opportunities.

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Collaborators:
Brown University
Rhode Island Hospital
Simulia

Project 2: Marine biofouling on high-performance molded materials

Researchers will use microscopic and molecular techniques to characterize the development of marine biofilms. By collaborating with a research university, Ametek SCP will be able to evaluate novel coatings and to expand its markets.

Collaborators:
University of Rhode Islamd
Ametek SCP

Project 3: A novel efficient technology for mercury emission control application

This team will work to develop new technologies for reducing human health risks associated with anthropogenic mercury emissions from coal-fired power plants and cement kilns. The group hopes its research will attract small business federal grants, angel investments, venture capital and collaborative investments from the industry.

Collaborators:
Brown University
Banyan Environmental Inc.

Project 4: A wound healing product for diabetic ulcers containing choroid plexus growth factors

Researchers will collaborate on development of a topical regenerative product for wound healing and will work to expand and strengthen preclinical research studies on the topic.

Collaborators:
Brown University
CytoSolve

Project 5: Antigenic targets of *Candida albicans* specific antibody fragments

The grant will support work to identify the molecular structure on the surface of the fungus *Candida albican* that are recognized by previously discovered antibodies to stop infection. This collaboration will support infrastructure at Bryant University, preliminary research for future federal grant dollars, student training and collaboration between universities.

Collaborators:
Women & Infants Hospital
Bryant University

Project 6: The inner-space classroom - Innovation for research and education in the ocean state

This group will develop software to provide access to marine science data and information through the University of Rhode Island's Inner Space Center. The grant will provide for increased marine science educational opportunities and enabling of research and education projects for federal funding.

Collaborators:
University of Rhode Island
RITE-Solutions

Project 7: Tick bite patch: Proof of concept for a first generation immunoinformatics derived anti-tick vaccine with transdermal delivery

This group will work to establish proof-of-principal for a catalytic approach to accelerate bench-to-clinic translation of a novel anti-tick vaccine for humans.

Collaborators:
University of Rhode Island
EpiVax
Isis

Project 8: Tracing business-critical web applications

Researchers will develop techniques for comprehensive measurement of the performance of rich web applications by applying causal tracing techniques to both the server and client. This effort will combine the strengths of a university research setting with real client data.

Collaborators:
Brown University
Tracelytics Inc.

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